

False Memory

A false memory is a recollection of something that never happened, or a memory of an event that differs materially from how it actually occurred. The central and most counterintuitive fact about false memories is that they can be vivid, detailed, emotional, and held with complete confidence — indistinguishable, to the person remembering, from a true memory. They are not lies: the person sincerely believes the false recollection is real. This makes false memory one of the most consequential topics in the law of evidence, particularly in cases that turn entirely on a single person's memory, such as allegations of childhood sexual abuse where the complainant and the accused may have been the only witnesses. This paper explains what false memories are, how they are produced, why they cannot be reliably distinguished from true memories by confidence or content, and what that means for the courtroom. It also stresses an essential counterweight: that memory is often accurate, and that the existence of false memory does not imply that any particular memory is false. It assumes no background in psychology, and the science here favors no party.

What a False Memory Is

Memory researchers distinguish a false memory — an error of commission, in which a person reports a detail or event that did not occur — from ordinary forgetting, an error of omission. A false memory may distort an existing detail (changing the color of a car), add a detail that was never present, or, in the most dramatic cases, supply an entire event that never took place. Many false memories arise from gist: the mind stores the general theme or meaning of an experience more durably than its exact particulars, and later reconstructs particulars that fit the theme but were not actually part of the event (Slotnick, 2017; Lane & Houston, 2021).

Far from being a sign of a defective mind, false memory is a by-product of an ordinarily adaptive memory system — one built to integrate perception, knowledge, inference, and imagination in order to make sense of the world, rather than to store a literal record. The same machinery that lets us understand and generalize also lets us, on occasion, remember things that never happened.

The DRM Paradigm and the Brain

The most widely used laboratory tool for studying false memory is the Deese–Roediger–McDermott (DRM) paradigm (Deese, 1959; Roediger & McDermott, 1995). Participants study a list of words all associated with a single non-presented word — for example, bed, rest, awake, tired, dream — and then, on a later test, falsely recall and confidently recognize the related word that was never shown (sleep), often at rates approaching those for words actually presented. The effect is robust across materials and populations and demonstrates how readily the mind manufactures a memory consistent with the gist of an experience. Brain-imaging work suggests that true and false memories engage overlapping regions but differ in degree: true memories tend to carry a richer sensory signature, reflecting the actual perceptual experience, whereas false memories rest more on general, gist-based processing (Slotnick & Schacter, 2004). That difference, however, is a matter of averages in the brain and does not translate into a usable test for any individual recollection.

Vivid False Memories of Whole Events

Beyond single words, researchers have shown that entire autobiographical events can be implanted. In the classic demonstration, a substantial minority of adults came to remember being lost in a shopping mall as children after gentle, repeated suggestion that it had happened (Loftus & Pickrell, 1995), and merely imagining an event that did not occur increases a person's confidence that it really did (Garry, Manning, Loftus, & Sherman, 1996). Subsequent work has implanted

false memories of more emotional and unusual events as well. The forensic significance is direct: people can and do form detailed, sincerely held memories of events that never occurred.

It is equally important, and equally well established, that not all memories of the distant or traumatic past are false. Survivors of Nazi concentration camps were found to retain vivid, detailed, and accurate memories of their experiences some four decades later (Wagenaar & Groeneweg, 1990), and corroborated cases exist of genuine memories recovered after long periods. The science of false memory therefore cuts in two directions: it establishes that a vivid memory is not, by virtue of its vividness, true — but it does not establish that any particular memory is false. Both errors — assuming all such memories are reliable, and assuming all are fabricated — are unsupported.

False Memories of Committing a Crime

A particularly consequential extension of this work concerns false memories not of being a victim but of being a perpetrator. Shaw and Porter (2015) reported that, after several suggestive interviews referencing an event supposedly corroborated by the participant's caregiver, a majority of young adults came to report detailed false memories of having committed a crime — such as theft or assault — during adolescence, including encounters with the police that never occurred. The finding bears directly on false confessions: it suggests that suggestive interrogation can, in principle, lead an innocent person not merely to confess but to come to believe in and "remember" a crime they did not commit.

The precise magnitude of the effect became the subject of careful scientific debate, and the balanced account matters. When other researchers recoded the data using stricter criteria that distinguish a false belief that an event occurred from a genuine false memory of experiencing it, the proportion meeting the standard for a full false memory fell to roughly a quarter to a third of participants rather than the seventy percent originally reported (Wade, Garry, & Pezdek, 2018; see the authors' reply in Shaw, 2018, and a corrigendum correcting computational errors in Shaw & Porter, 2018). Even on the conservative reading, the demonstration that something like one in three people can be led, through suggestion alone, to a detailed false memory of committing a crime is a sobering one for any process that relies on confessions or self-incriminating recollections. Archival study of real cases in which false memory has been raised confirms that the issue arises in legal practice as well as in the laboratory (Shaw, Leone, Ball, & Felstead, 2017).

A False Memory Is Not a Lie

A crucial distinction separates a false memory from a willful fabrication. In a fabrication, the person knows the account is untrue and reports it anyway; in a false memory, the person believes in the authenticity of the recollection. This has a sharp consequence for evidence: because the rememberer is sincere, the ordinary cues by which we detect deception — and the witness's own confidence — are of no help in identifying a false memory. Confidence cannot serve as a proxy for accuracy, a conclusion reinforced by the broad body of research showing only a limited relationship between how certain a witness is and how accurate they are.

Can True and False Memories Be Told Apart?

Because confidence fails, researchers have asked whether the content of a memory betrays its origin. The source-monitoring framework holds that we judge whether a memory is real by evaluating its qualities — the amount of perceptual, contextual, and emotional detail it contains — and attributing it to a source accordingly (Johnson & Raye, 1981; Johnson, Hashtroudi, & Lindsay, 1993). On average, true memories do tend to carry more such detail than false ones (Mather, Henkel, & Johnson, 1997; Porter, Yuille, & Lehman, 1999). The decisive question for the law,

however, is whether an evaluator who does not already know the truth can use these qualities to classify a particular memory — and here the evidence is discouraging. Even people told exactly which features distinguish true from false memories cannot reliably apply them, and structured content-analysis methods such as Criteria-Based Content Analysis (CBCA) have been found to be driven more by how familiar or rehearsed an account is than by whether it is true, performing poorly as a test of authenticity (Blandón-Gitlin, Pezdek, Rogers, & Brodie, 2005). The sober conclusion is that there is presently no reliable method — not confidence, not content analysis, not demeanor — to determine whether a given individual's memory is true or false from the memory itself.

How False Memories Are Created

False memories of significant events do not usually arise spontaneously; they are typically cultivated by particular conditions. The principal ingredients are gist and suggestion: when a person is encouraged to accept that an event is plausible, to imagine it, to picture its details, or to infer what "must have" happened, and when this is repeated over time, imagery and inference can be misremembered as genuine recollection. The interviewing and therapeutic techniques most strongly implicated — leading and repeated questioning, guided imagery, and direct suggestion that an event occurred — are precisely those that the eyewitness and clinical literatures counsel against, and they are treated more fully in the companion papers on suggestibility, the misinformation effect, recovered and repressed memory, and external sources of memory distortion. One aggravating factor deserves emphasis here: the passage of time. Because investigators and therapists often do not speak with a witness or client until days, weeks, or longer after an event, the original memory has weakened and become more susceptible to suggestion by the time these techniques are applied — a point developed in the companion paper on delayed recall.

False Memory and the Law

The legal implications follow from the science. First, a vivid, confident, detailed memory may nonetheless be entirely false, so the qualities that jurors instinctively equate with reliability cannot establish it. Second, there is no validated technique for sorting true from false memories in an individual case, which means claims that an expert can authenticate or debunk a particular memory by its content should be regarded with caution; the limitations of methods like CBCA are themselves a proper subject of testimony. Third, the conditions under which a memory was elicited — the suggestiveness of the questioning, the use of imagination or hypnosis, the delay, and the number of interviews — bear heavily on the risk that it is false, and are often more informative than the memory's content. These issues are especially acute in cases resting on recovered memories of childhood abuse, addressed in the companion paper on recovered and repressed memory.

At the same time, the law must avoid the opposite overreach. The reality of false memory does not mean that memories of abuse or other crimes are generally unreliable; corroborated and continuously held memories of even very old and traumatic events can be accurate. Whether an expert may explain this research to a jury is governed by the general standards for expert evidence — *Daubert v. Merrell Dow Pharmaceuticals* (1993), as extended by *Kumho Tire Co. v. Carmichael* (1999), or the *Frye* general-acceptance test still followed in some jurisdictions (*Frye v. United States*, 1923) — and a witness may testify only from personal knowledge (Fed. R. Evid. 602). Such testimony informs the trier of fact about how false memories form and why they cannot be identified by confidence or content; it does not, and cannot, establish that a particular witness's memory is false, a judgment the law reserves to the fact-finder.

Special Issues in Legal Practice

The principles described above apply with equal force to every party in a legal proceeding. Memory operates the same way regardless of who is asking the questions, and the science summarized here favors no side. What differs between the parties is not the science but the vantage point — the particular places where memory issues tend to surface, and the particular errors each party is best positioned to guard against. The two summaries below identify those recurring issues. They are offered for orientation, not as litigation strategy; in every case the controlling question is what the evidence in that case will, and will not, support, and the expert's role is to inform the trier of fact rather than to advocate for either side.

Special Issues for Prosecutors

For the State, the issue most likely to surface is whether a memory central to the case was formed through experience or cultivated by suggestion. The error best guarded against is allowing a vivid, detailed, confident account to be treated — by the State or the jury — as self-authenticating, when the science shows that false memories share exactly those qualities and that no content-based test can certify a memory as true. The strongest protection is in how the account was obtained: an early statement, elicited through open-ended and non-leading questioning before suggestive techniques, long delay, or repeated interviews could operate, is far more defensible than one developed through imagination exercises or directive questioning. Documenting the conditions of every interview allows the State to show that a memory reflects the witness's experience rather than the manner of questioning.

Equally, the State is entitled to resist the overclaim that false-memory research renders genuine memories suspect as a class. The literature confirms that accurate memories of even old and traumatic events exist, and that corroboration and continuous recollection support reliability. Anchoring the case in well-obtained accounts and independent evidence, rather than in the emotional force of the telling, keeps the proof on solid ground.

Special Issues for Defense

For the defense, the recurring task is to examine whether a memory could have been created or distorted by the conditions under which it emerged. The issue most likely to surface is reliance on a confident, detailed recollection — particularly one that surfaced or expanded during suggestive therapy, repeated or leading interviews, imagination or hypnosis, or after long delay — where the science indicates a real risk of false memory. The error best guarded against is overclaiming: the existence of false memory does not prove that a particular memory is false, sincere witnesses are often accurate, and corroborated memories of remote events can be genuine. Scrutinizing the origin and history of the memory — how and when it arose, what techniques were used, and whether independent corroboration exists — is the sounder course than attacking the memory's vividness as such.

The corresponding safeguard is to ensure the trier of fact understands what the science establishes: that detailed, confident, emotional memories of events that never happened can and do form; that such memories are sincere, not lies; that no reliable method exists to distinguish true from false memories by confidence or content; and that suggestive conditions and delay raise the risk. Where admissible, expert explanation of false-memory research can help the factfinder weigh a contested memory in light of how it was elicited — without either dismissing honest memory or treating an unverified memory as proven.

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